FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. APPLICATION NO. PATENT AND TRADEMARK OFFICE ASMMC.036AUS 09/975,466 INFORMATION DISCLOSURE STATEMENT **BY APPLICANT APPLICANT** SOPHIE et al. OTPE FILING DATE **GROUP** October 9, 2001 2812

JAN	2 9 21	002		U.S. PATENT DOCUMENTS		,	:
EXAMPLE F	DEM	I 🔊	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
EK	1	4,058,430	11/15/97	Suntola et al.	156	611	11/25/75
1	2	5,711,811	01/27/98	Suntola et al.	118	711	11/28/95
	3	5,731,634	03/24/98	Matsuo et al.	257	752	06/06/96
	4	5,939,334	08/17/99	Nguyen et al.	438	689	05/22/97
	5	6,033,584	03/07/00	Ngo et al.	216	67	12/22/97
	6	6,066,892	05/23/00	Ding et al.	257	751	05/14/98
4	7	6,124,189	09/26/00	Watanabe et al.	438	586	03/14/97
Ek	8	6,130,123	10/10/00	Liang et al.	438	217 ထ	06/30/98

				FOREIGN PATENT DOCUMENTS		=	5 -	7
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRAINS ROYES	LATION NO
EX	9 🗸	0 469 470 A1	05.02.92	EP			3	
EK.	10	EP 0 880 168 A2	25.11.98	EP		_		
Ex	11-	WO 93/10652	27.05.93	РСТ	_	_		
EK	12	WO 00/03420	20.01.00	РСТ	_	_		
EL	13	GB 2 340 508 A	23.02.00	UK	-			
	14	DE 41 08 73	03.26.25	Germany				

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	18 30l Technology. IBM's Next Advance In Chip Design, Date unknown
EX	Baglia, J., Associate Editor, "New Designs and Materials Tackle 1 Gb Memory Challenge," <u>Semiconductor International</u> , World Wide Web address: semiconductor.net, November 2000.
EK	17 Basceri, C., Ph.D. thesis, "Electrical and Dielectric Properties of (Ba,Sr) TiO ₃ Thin Film Capacitors for Ultra-High Density Dynamic Random Access Memories," pp. 13-31, Raleigh, N.C. State University (1997).
EK	18 Bursky, D., "Hit Up IEDM For Gigabit And Denser DRAMs And Merged Logic/Memory," <u>Electronic Design</u> , World Wide Web address: planetee.com, (December 1, 1998).
SK	19—Campbell, S.A. et al., "Titanium dioxide (TiO₂)-based gate insulators," IBM J. Res. Develop., Vol. 43, No. 3, pp. 383-392 (May 1999).
	28 Fukuzumi, Y. et al., "Liner-Supported Cylinder (LSC) Technology to realize Ru/Ta₂O₂/Ru Capacitor for Future DRAMs," IEEE, IED 2000, Session 34 (2000).
	21. Hones, P. et al., MOCVD of ThinRuthenium Oxide Films. Properties and Growth Kinetics, Chem. Vap. Deposition, Vol. 0, No. 4, pp. 193-198 (2000).

EXAMINER	Esiz	Kali	

DATE CONSIDERED

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

١	•		•
<u>'</u>		SHE	ET 2 OF 2
	APPLICATION NO. 09/975,466		

FORM PTO-1449 U

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. ASMMC.036AUS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

B SEVERAL SUSETS IF NECESSARY)

APPLICANT SOPHIE et al.

FILING DATE October 9, 2001 GROUP 2812

	1	AN 2 9 DUL E
EXAMINE! INITIAL	יוטר	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	<u> </u>	Incure the National Control of Sputtered PZT expecitor on multilevel interconnects for embedded EaRAM," IEEE, IED 2000, Session 34 (2000).
يح	28	Integrated Circuit Engineering Corporation, Practical Integrated Circuit Fabrication Seminar (1998).
	24	Jung, D. et al., "A Novel IntrogPt-PZT-Pt/IrOz/Ir Capacitor for A Highly Reliable Mega-Scale FRAM," LEEE, IED 2000, Session 34, (2000).
CK	25	Xawamoto, Y. et al., "The Outlook for Semiconductor Processes and Manufacturing Technologies in the 0.1-μm Age," Hitachi Review, Vol. 48, No. 6, pp. 334-339 (1999).
Eil	26	NEC Device Technology International, No. 48, pp. 4-8, (1998).
ΣK	27	Onda N. et al., "Hydrogen Plasma Cleaning a Novel Process for IC-Packaging," p. 311, Worldwide Web Address: Semiconductor Fabtech.com (1998).
	28	Selenki R. et al., "Atomic Layer Deposition of Copper Seed Layers," Electrochemical and Solid-State Letters, Vol. 3, No. 10, pp. 479-480 (2000).
	29	Sundani et al., "Oral presentation of dual damascene process, slides.
ER	30	Ultiainen, M. et al., "Studies of NiO thin film formation by atomic layer epitaxy," Materials Science & Engineering, Vol. B54, pp. 98-103 (1998).
	31	Ultriainen, M. et al., "Studies of metallic trin film growth in an atomic layer epitaxy reactor using M(asse), (M = Ni, Cu, Pt) precursors," Applied Surface Science, Vol. 157, pp. 151-150 (2000).
EX	_ 32	Winbond News Release, World Wide Web address: winbond.com, (December 13, 2000).
	33	Won, Seek Jun et al., "Conformat CVD-Ruthenium Process for MIM Capacitor in Giga-bit DRAMe," IEEE, IED 2000, Session 34 (2000).
	34	, Xu, P. et al., "A Breakthrough in Low-k Barrier/Etch Stop Films for Copper Damascene Applications." Semiconductor Febtoch, 11th Edition, p. 239 (2000).
EK	35	Yoon, Dong-Soo et al., "Tantalum-ruthenium dioxide as a diffusion barrier between Pt bottom electrode and TiSi₂ ohmic contact layer for high density capacitors," Journal of Applied Physics, Vol. 86, No. 5, pp. 2544-2549 (1999).
	36	Yoon, Dong-Soo et al., "Investigation of RuO _{e-} Incorporated Pt Layer as a Bottom Electrode and Diffusion Benier for High Epsilon Capacitor Applications," Electrochemical and Solid-State Letters, Vol. 3, No. 8, pp. 373-376 (2000).
Ex	37	Yoon, YG. et al., 197 th Meeting Program Information II, The Electrochemical Society, 197 th Meeting – Toronto, Ontario, Canada May 14-18, 2000, Program Information, I1 – Rapid Thermal and Other Short-Time Processing Technologies I, Electronics Division/Dielectric Science and Technology Division/High Temperature Materials Division, 2000, Wednesday, May 17, 2000, New Applications of RTP, Co-Chairs: A. Fion and DL. Kwond. Time 11:10 Abs#550, Title: Development of RTA Process for the Crystallization of a-Si Thin Film – YG. Yoon, TK. Kim, KB. Kim, YY. Chio, B. I. Lee, and SK. Joo (Seoul National Univ.)

W:\DOCS\ANM\ANM-2624.DOC 010302

8-1 2002 MAIL ROOM

EXAMINER Ears Kill

DATE CONSIDERED 10/10/62

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

FORM PTO-14

		ORIGI	NALLY PIECE	SHEET 1 OF 1
RM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. ASMMC.036AUS	APPLICATION NO 09/975,466	
	DISCLOSURE STATEMENT Y APPLICANT	APPLICANT SOPHIE et al.		
PUBE SEVERA	L SHEETS IF NECESSARY)	FILING DATE October 9, 2001	GROUP 2812	

MAR	0,2	2)					
AIEMA		CARREL S		U.S. PATENT DOCUMENTS			
EXAMINER INITIAL	HAY	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
EK	1.	US 2001/0018266 A1	08/30/01	Jiang et al.	438	678	05/09/01
1	2.	6,303,500 B1	10/16/01	Jiang et al.	438	678	02/24/99
	3.	US 6,323,131 B1	11/27/01	Obeng et al.	438	687	06/13/98
	4.	US 2001/0052318 A1	12/20/01	Jiang et al.	118	403	08/01/01
EK	5.	US 6,346,151 B1	02/12/02	Jiang et al.	118	403	12/16/99

	FOREIGN PATENT DOCUMENTS							
EXAMINER	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANS	TRANSLATION	
INITIAL						YES	NO	

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

W:\DOCS\ANM\ANM-2902.DOC 022802

RECEIVED

MAY 0 1 2002

OFFICE OF PETITIONS

EXAMINER	Ein Kilw	DATE CONSIDERED	10/0/02	

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.